

AMENDMENTS TO THE CLAIMS

Listing of Claims:

1-31. (Cancelled)

32. (Currently Amended) A multi-lumen catheter comprising:

(a) a one-piece multi-lumen tube portion having a plurality of integrally formed lumens, the multi-lumen tube portion having a proximal end and a distal end;

(b) a distal portion comprising a plurality of distal single-lumen tubes, each distal single-lumen tube having a proximal end and a distal end, the proximal end of each distal single-lumen tube being permanently and directly connected to the distal end of the multi-lumen tube portion, without a hub, such that the lumen of each distal single-lumen tube is in fluid communication with one of the plurality of lumens of the multi-lumen tube portion;

(c) a proximal portion comprising a plurality of single-lumen tubes, each proximal single-lumen tube having a distal end and a proximal end, the distal end of each proximal single-lumen tube being permanently and directly connected to the proximal end of the multi-lumen tube portion such that the lumen of each proximal single-lumen tube is in fluid communication with one of the plurality of lumens of the multi-lumen tube portion; and

a plurality of extension members, each extension member configured at a proximal end thereof to be selectively attachable to one of the distal single-lumen tubes and configured at a distal end thereof for connection to a fluid exchange device ~~after reverse tunneling of the catheter tube within a patient.~~

33. (Previously Presented) The multi-lumen catheter according to Claim 32, wherein each lumen of the multi-lumen tube portion is in fluid communication with the lumen of one of the distal single-lumen tubes and the lumen of one of the proximal single-lumen tubes, thereby defining a flow path through the catheter.

34. (Previously Presented) The multi-lumen catheter according to Claim 32, wherein the multi-lumen tube portion includes two lumens, the distal portion includes two distal single-lumen tubes, and the proximal portion includes two proximal single-lumen tubes.

35. (Previously Presented) The multi-lumen catheter according to Claim 34 further comprising a connector adapted to receive and hold the distal ends of the distal single-lumen tubes.

36. (Previously Presented) The multi-lumen catheter according to Claim 35 wherein the connector further comprises means for attaching the connector to a trocar.

37. (Previously Presented) The multi-lumen catheter according to Claim 35 further comprising a sheath that may be disposed over at least a portion of the distal ends of the two distal single-lumen tubes and at least a portion of the connector.

38. (Previously Presented) The multi-lumen catheter according to Claim 32 wherein the multi-lumen tube portion, the distal single-lumen tubes, and the proximal single-lumen tubes are comprised of a fusible material, and the distal single-lumen tubes and proximal single-lumen tubes are respectively fused to the distal and proximal ends of the multi-lumen tube portion.

39. (Previously Presented) The multi-lumen catheter according to Claim 32 wherein the distal single-lumen tubes have a substantially round cross-section over at least a portion of their length.

40. (Previously Presented) The multi-lumen catheter according to Claim 32 wherein the proximal single-lumen tubes have a substantially D-shaped cross-section over at least a portion of their length.

41. (Previously Presented) The multi-lumen catheter according to Claim 32 wherein the distal single-lumen tubes have a substantially round cross-section over at least a portion of

their length and the proximal single-lumen tubes have a substantially D-shaped cross-section over at least a portion of their length.

42. (Previously Presented) The multi-lumen catheter according to Claim 32 wherein at least one of the proximal single-lumen tubes is shorter in length than at least one other proximal single-lumen tube.

43. (Previously Presented) The multi-lumen catheter according to Claim 32 further including a stabilizing cuff affixed to an outer portion of the multi-lumen tube.

44. (Previously Presented) The multi-lumen catheter according to Claim 32 wherein the proximal end of each extension member comprises a cannula configured to be inserted into the single-lumen of one of the distal single-lumen tubes.

45. (Previously Presented) The multi-lumen catheter according to Claim 44 wherein each extension member further comprises a mating compression fitting and a tube portion, wherein a proximal end of the mating compression fitting is rigidly attached to the cannula, a distal end of the mating compression fitting is rigidly attached to a proximal end of the tube portion and the mating compression fitting allows fluid communication between the cannula and the tube portion.

46. (Previously Presented) The multi-lumen catheter according to Claim 45 wherein the mating compression fitting further comprises a threaded connection portion adjacent the proximal end thereof and the extension member further comprises a connector hub having a central lumen of a diameter whereby the distal single-lumen tube of the catheter may be slideably received in the central lumen of the connector hub, the connector hub also comprising a connection portion mateable with the threaded connection portion of the mating compression fitting.

47. (Previously Presented) The multi-lumen catheter according to Claim 32, wherein each of the proximal single-lumen tubes includes a tube wall, and each of the proximal single-lumen tubes includes at least one opening extending through its tube wall.

48. (Previously Presented) The multi-lumen catheter according to Claim 32, wherein an external portion of at least one of the distal single-lumen tubes includes indicia, the indicia indicating a discrete flow path through the catheter.

49. (Previously Presented) The multi-lumen catheter according to Claim 32 wherein the proximal single-lumen tubes are two in number and have longitudinal axes which intersect at an included angle in a free state, the included angle being in a range from about 10 degrees to about 30 degrees.

50. (Currently Amended) A dual-lumen catheter comprising:

(a) a one-piece dual-lumen tube portion having a plurality of integrally formed lumens a proximal end and a distal end, the dual-lumen tube having a plurality of integrally formed lumens;

(b) a distal portion comprising two distal single-lumen tubes, each distal single-lumen tube having a proximal end and a distal end, the proximal end of each distal single-lumen tube being permanently and directly connected to the distal end of the dual-lumen tube portion, without a hub, such that the lumen of each distal single-lumen tube is in fluid communication with one of the lumens of the dual-lumen tube portion; and

(c) a proximal portion comprising two proximal single-lumen tubes, each proximal single-lumen tube having a proximal end and a distal end, the distal end of each proximal single-lumen tube being permanently and directly connected to the proximal end of the dual-lumen tube portion such that the lumen of each proximal single-lumen tube is in fluid communication with one of the lumens of the dual-lumen tube portion.

51. (Canceled)

52. (Previously Presented) The dual-lumen catheter of according to Claim 51, further comprising a plurality of extension members, each extension member configured at a proximal end thereof to be attachable to one of the distal single-lumen tubes and configured at a distal end thereof for connection to a fluid exchange device.

53. (Previously Presented) The dual-lumen catheter of according to Claim 50, further comprising two extension members comprising:

- (i) a cannula at the proximal end of the extension member configured to be inserted into and retained by the single-lumen of one of the distal single-lumen tubes;
- (ii) a mating compression fitting; and
- (iii) a tube portion,

wherein a proximal end of the mating compression fitting is rigidly attached to the cannula, a distal end of the mating compression fitting is rigidly attached to a proximal end of the tube portion and the mating compression fitting allows fluid communication between the cannula and the tube portion.

54. (Previously Presented) The dual-lumen catheter according to Claim 53 wherein a distal end of the tube portion comprises means for connecting the tube portion to a fluid exchange device.

55. (Previously Presented) The dual-lumen catheter according to Claim 53 wherein the mating compression fitting further comprises a threaded connection portion adjacent the proximal end thereof and the extension member further comprises a connector hub having a central lumen of a diameter such that the distal single-lumen tube of the catheter may be slideably received in the central lumen of the connector hub, the connector hub also comprising a connection portion mateable with the threaded connection portion of the mating compression fitting.

56. (Previously Presented) The dual-lumen catheter according to Claim 50 wherein the dual-lumen tube portion, the distal single-lumen tubes, and the proximal single-lumen tubes

are comprised of a fusible material, and the distal single-lumen tubes and proximal single-lumen tubes are respectively fused to the distal and proximal ends of the dual-lumen tube portion.

57. (Previously Presented) The dual-lumen catheter according to Claim 50 wherein the distal single-lumen tubes have a substantially round cross-section over at least a portion of their length.

58. (Previously Presented) The dual-lumen catheter according to Claim 57 wherein the at least one of the proximal single-lumen tubes is shorter in length than at least one other proximal single-lumen tube.

59. (Previously Presented) The dual-lumen catheter according to Claim 50 further including a stabilizing cuff affixed to an outer portion of the dual-lumen tube.

60. (Currently Amended) A multi-lumen catheter comprising:

(a) a one-piece multi-lumen tube portion having a plurality of integrally formed lumens, the multi-lumen tube portion having a proximal end and a distal end;

(b) a distal portion comprising a plurality of distal single-lumen tubes, each distal single-lumen tube having a proximal end and a distal end, the proximal end of each distal single-lumen tube being permanently and directly connected to the distal end of the multi-lumen tube portion, without a hub, such that the lumen of each distal single-lumen tube is in fluid communication with one of the plurality of lumens of the multi-lumen tube portion;

(c) a proximal portion comprising a plurality of single-lumen tubes, each proximal single-lumen tube having a distal end and a proximal end, the distal end of each proximal single-lumen tube being permanently and directly connected to the proximal end of the multi-lumen tube portion such that the lumen of each proximal single-lumen tube is in fluid communication with one of the plurality of lumens of the multi-lumen tube portion.

61. (Previously Presented) The multi-lumen catheter according to Claim 60 further comprising a plurality of selectively attachable connector hubs including veinal and arterial

connector hubs, each connector hub being configured to be selectively attachable to the distal end of one of the distal single-lumen tubes and being configured for selective connection to a fluid exchange device.